



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,041	01/22/2002	Dave Jaussaud	P-1084	1381

7590

05/12/2003

Scott R. Cox
Suite 2200
400 West Market St.
Louisville, KY 40202

EXAMINER

ILDEBRANDO, CHRISTINA A

ART UNIT

PAPER NUMBER

1725

DATE MAILED: 05/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/054,041

Applicant(s)

JAUSSAUD ET AL.

Examiner

Christina Ildebrando

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1725

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-12, in Paper No. 6 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 and 7-12 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 940 174.

EP 0 940 174 discloses an adsorbent composition useful in the separation of gases. The adsorbent comprises a binder component and a crystalline zeolite (page 3, lines 45-50). It is taught by the reference that a clay binder of needle crystals in the form of fibers is preferred, and teaches that use of attapulgite clay (page 4, lines 35-40).

The reference teaches that 5 to 30 parts by weight clay is mixed with 100 parts by weight of zeolite followed by calcination to form the adsorbent product (page 4, lines 55-59). A pore forming additive such as carboxymethylcellulose may be added during the mixing step (page 5, lines 25-30).

The EP reference does not specifically disclose that the attapulgite clay possesses the properties recited in the instant claims, i.e. "tapped bulk density" and "water adsorption capacity." However, the EP reference teaches that the binder is in the

Art Unit: 1725

form of needle crystals, which meets the description of the "highly dispersed" attapulgite clay described in the instant specification. Refer to pages 10-11 of the instant specification. It is also disclosed in the specification that the highly dispersed attapulgite clay would possess the claimed bulk density and water adsorption capacity. Therefore, it is the position of the examiner that the needle crystals taught by the EP reference are highly dispersed attapulgite clay fibers required by the instant claims and as such, would inherently possess the characteristics instantly claimed. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

The process limitations in claim 7 are noted. However, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by EP 0 940 174.

4. Claims 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kramer.

Kramer (US 5,413,978) discloses a treated attapulgite clay which can be combined with active zeolitic material to form an FCC catalyst (Abstract). It is taught that

Art Unit: 1725

the treated attapulgite clay preferably has a bulk density in the range of 0.7-0.9 g/cc (column 3, lines 60-69). It is taught that the proportions of clay to catalytically active material is in the range from 5:95 to 95:5, usually 30:70 (column 5, lines 50-55).

Kramer does not specifically disclose the water adsorption capacity of the treated attapulgite clay. However, it is the position of the examiner that because the clay has the required bulk density, the water adsorption capacity would inherently be the same. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

The process limitations in claim 7 are noted. However, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Kramer.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1725

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 940 174 as applied above for claims 1-5 and 7-12.

The teachings of EP 0 940 174 are as described above for claims 1-5 and 7-12. The difference between the claims and the reference is that the reference does not disclose how much of the pore forming additive is added during the mixing step. However, the reference does teach that it is necessary to form the macropores. It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the instantly claimed ranges through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Boesch*, 205 USPQ 215. One would have been motivated to optimize the amount of additive present to ensure that the correct proportion of macropores were formed.

7. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer as applied to claims 7-11 above, and further in view of either Ward or Drake et al.

The teachings of Kramer are as described above for claims 7-11.

The difference between the reference and the claims is that Kramer does not teach how the zeolite and attapulgite clay are combined.

Ward (US 5,468,700) teaches a catalyst composition useful in hydrocarbon conversion processes, including catalytic cracking. The reference teaches that a zeolite component and a clay binder such as attapulgite clay, are mixed, followed by

Art Unit: 1725

calcination, to form the catalyst product. Refer to column 7, lines 55-65 and column 9 of '700.

Drake et al. (US 5,883,034) discloses a clay bound catalyst composition useful in hydrocarbon conversion processes. Drake et al. teaches that a zeolite component and a clay component, such as attapulgite, are mixed followed by calcination, to form the catalyst product. Refer to column 3, lines 30-35 and column 6, lines 20-40 of '034.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention of Kramer to include the calcination step taught by Ward or Drake et al. in light of the teachings by either Ward or Drake et al. that mixing the zeolite and clay followed by calcination is a conventional method of preparing a zeolite clay composite particle. Because all of the catalyst compositions contain the same materials and can be used in the same or similar process of use, one would have reasonable expectation of success from the combination.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Ildebrando whose telephone number is (703) 305-0469. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (703) 308-3318. The fax phone numbers for

Art Unit: 1725

the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

CAI
May 7, 2003



TOM DUNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700